

*Definitive Technology*<sup>®</sup>  
*The Leader in High-Performance Loudspeakers*<sup>®</sup>

# PowerMonitor<sup>™</sup>

## 500 • 700 • 900

Audio/Video Magnetically Shielded Loudspeakers  
with Built-In Powered Subwoofer

### **Owner's Manual**

### *Congratulations*

Congratulations on your purchase of a Definitive Technology PowerMonitor Audio/Video Loudspeaker System. This revolutionary loudspeaker utilizes state-of-the-art components (cast-basket homopolymer-coned bass-midrange drivers, moving coil ferrofluid-cooled pure aluminum dome high frequency radiator, long excursion subwoofer, Infinite Power Source<sup>™</sup> amplifier, uniphase crossover networks, etc.), a non-resonant monocoque cabinet, low diffraction construction and complete magnetic shielding, in order to achieve the most lifelike sound possible in your listening room for many years to come.

The Definitive Technology PowerMonitors are compact high definition loudspeaker systems designed for use in audio/video systems of the highest quality. Because of their compact size, wide range, high power handling and natural articulate clarity, they are ideal for use as a left main, right main, and center speaker (which may be stand, shelf, wall or in-cabinet mounted) in conjunction with all surround sound decoding systems, including Dolby Pro Logic\*, Dolby Digital AC-3\*, DTS\*, Dolby Digital EX\*, as well as all 6.1 and 7.1 systems. In addition, the PowerMonitors are ideal for use as rear or side surround speakers in all surround sound decoding systems or as audiophile quality main speakers in a high quality stereo system.

# Safety Precautions



**CAUTION!** To reduce the risk of electric shock and fire, do not remove the cover or back plate of this device. There are no user serviceable parts inside. Please refer all servicing to licensed service technicians. **Avis:** Risque de choc électrique, ne pas ouvrir.

**CAUTION!** The international symbol of a lightning bolt inside a triangle is intended to alert the user to uninsulated “dangerous voltage” within the device’s enclosure. The international symbol of an exclamation point inside a triangle is intended to alert the user to the presence of important operating, maintenance and servicing information in the manual accompanying the device.

**CAUTION!** To prevent electrical shock, match wide blade of plug to wide slot, fully insert. **Attention:** Pour éviter les chocs électriques, introduire la lame la plus large de la fiche dans la borne correspondante de la prise et pousser jusqu’au fond.

**CAUTION!** To reduce the risk of electrical shock, do not expose this equipment to rain or moisture.

1. Read Instructions—All safety and operating instructions should be read before operating the device.
2. Retain Instructions—The safety and operating instructions should be retained for future reference.
3. Heed Warnings—All warnings on the device and in the operating instructions should be adhered to.
4. Follow Instructions—All operating and safety instructions should be followed.
5. Water & Moisture—The device should never be used in, on or near water for risk of fatal shock.
6. Carts & Stands—The device should only be used on carts or stands recommended by the manufacturer.
7. Wall & Ceiling Mounting—The device should be mounted on a wall or ceiling only as recommended by the manufacturer.
8. Ventilation—The device should always be located in such a way that it maintains proper ventilation. It should never be placed in a built-in installation or anywhere that may impede the flow of air through its heat sink.
9. Heat—Never locate the device near heat sources such as radiators, floor registers, stoves or other heat-generating devices.
10. Power Supply—The device should only be connected to a power supply of the type described in the operating instructions or as marked on the device.
11. Power Cord Protection—Power cables should be routed so they are not likely to be stepped on or crushed by items placed on them or against them. Special attention should be paid to areas where the plug enters a socket or fused strip and where the cord exits the device.
12. Cleaning—The device should be cleaned in accordance with manufacturer’s instructions.
13. Periods Of Non-Use—The device should be unplugged when not being used for extended periods.
14. Dangerous Entry—Care should be taken that no foreign objects or liquids fall or are spilled inside the device.
15. Damage Requiring Service—The device should be serviced by licensed technicians when:
  - The plug or power supply cord has been damaged.
  - Objects have fallen or liquid spilled inside of the device.
  - The device has been exposed to moisture.
  - The device does not appear to be operating properly or exhibits a marked change in performance.
  - The device has been dropped or the cabinet becomes damaged.
16. Service—The device should always be serviced by licensed technicians. Only replacement parts specified by the manufacturer should be used. The use of unauthorized substitutions may result in fire, shock, or other hazards.

## **Unpacking Your PowerMonitors**

### **Please Inspect For Shipping Damage**

Each loudspeaker leaves our plant in perfect condition. Any visible or concealed damage most likely occurred in handling after it left our plant and should be reported at once to your Definitive dealer or the delivery company that delivered your loudspeaker. Please unpack your system carefully. Save all cartons and packing materials in case you move or need to ship your system. Record the serial number found on the back of the PowerMonitors in the appropriate place on your warranty card.

### **Positioning the PowerMonitors in Your Room**

The PowerMonitors are very flexible in terms of their positioning and placement requirements. They can be placed on a bookshelf, on or in an entertainment cabinet (in the open or enclosed behind a grille or door with appropriate opening to the room), on a stand, or mounted on the wall. They can be positioned vertically or horizontally (just be sure that if you position them horizontally that the side of the speaker where the woofer is located under the grill cloth — you can tell by feeling the cloth — faces up). The side of the speaker where the woofer is located should not be pressed right up against a wall or another object but should have at least 1 to 2" of clearance (the woofer side of the speaker can be very close to a side wall, just not pressed against it).

Please remember that although these recommendations are usually valid, all rooms and listening set-ups are somewhat unique, so do not be afraid to experiment with the speakers. Remember, whatever sounds best to you is correct.

The speakers should usually be placed a minimum of 5 to 7 feet apart and kept away from the side walls and corners if possible. A good rule of thumb is to place the speakers separated by one half the length of the wall they are positioned along, and each speaker one quarter the length of the back wall away from the side wall.

Speakers may be angled in toward the listening position or left parallel with the rear wall. Angling the speakers in (pointed directly at the listener) will result in a somewhat brighter, clearer sound with a sharper focus and a more solid central image (generally, we recommend this), while leaving the speakers parallel with each other will result in a less bright, more diffuse sound.

The PowerMonitors are mirror imaged (packing cartons are labeled speaker 1 and speaker 2) with the side mounted subwoofers located so they may be set up with both woofers facing in (toward each other) or both woofers facing out (away from each other). (Feel the side of the speakers to determine which side the woofer is on.) Facing the woofers in or out will vary the sound somewhat and which way is best will vary with your room. Again, experiment to determine the best location for the speakers. If you use a PowerMonitor for a center speaker, you may use either a speaker #1 or speaker #2, and it may be positioned either vertically or horizontally.

## Speaker Break-In

Your PowerMonitors should sound good right out of the box; however, an extended break-in period of 20-40 hours or more of normal playing is required to reach full performance capability. Break-in allows the suspensions to work in and results in fuller bass, a more open “blossoming” midrange and smoother high frequency reproduction.

## Connecting Your Loudspeakers

### Hooking Up Your PowerMonitors

Your PowerMonitors each have one pair of gold 5-way binding posts and one low level RCA LFE input. Normally, you will hook up the left main/front channel red(+) terminal of your receiver or amplifier to the red(+) terminal of your left PowerMonitor and the left main/front channel black(-) terminal of your receiver or amplifier to the black(-) terminal of your left PowerMonitor. Connect the right channel main/ front channel red(+) terminal of your amplifier or receiver to the red(+) terminal of your right PowerMonitor and the black(-) terminal of the right main/front channel of your receiver or amplifier to the black(-) terminal of your right PowerMonitor. If your receiver/decoder has a bass management system, tell it that you have large left and right channel speakers and no subwoofer. The speaker’s electronics will take an infinitesimally small signal from the speaker level input and convert it to a low level signal which then drives the built-in subwoofer power amp.

## **Using Your PowerMonitors with Dolby Digital AC-3 Systems**

### **Hooking Up with Speaker Wire Only**

The simplest implementation of use with Dolby Digital is to simply hook-up your PowerMonitors with speaker wire as described above and “tell” your bass management system that you have “Large” left and right front speakers and “no” subwoofer. The bass management system will then send the LFE .1 channel signal into the left and right channels and it will be reproduced by the subwoofers in your PowerMonitors giving you all the benefits of Dolby Digital and the discrete LFE signal. Bass management for the center and rear channels will normally be set on “Small”. (Although this will vary depending on the specific speakers; for instance, if you are using a PowerMonitor, C/L/R 2300, C/L/R 2500, or C/L/R 3000 as a center channel, you would normally set center on “Large”.) However, you may wish to experiment with this for best sound in your system.

### **Using the LFE Input on Your PowerMonitors**

With Dolby Digital AC-3, you also have the option to use the low level LFE input in addition to the speaker wires. To do this, simply use a Y connector coming out of the LFE output jack on your electronics to feed two line level cables, one connected to the LFE input on the right speaker and the other one connected to the LFE input on the left speaker. Tell your bass management system that you have “Large” left and right main front speakers and “yes” a subwoofer. In order to properly balance the bass on the front speakers when hooked up this way, listen to music on the system in stereo and set the level controls on the back of your speakers for best balance. Then, while listening to a movie, using the level adjustment for the subwoofer output on your receiver or decoder, set the LFE output for best sound with movies. Using this type of hookup will enable you to balance the bass level control on the speaker for music while boosting up the LFE level for extra impact on movies. Again, bass management for the center and rear channels should normally be set as described above; however, you may wish to experiment for best sound with your system.

## **Using Your PowerMonitors with an Additional Subwoofer on the LFE Channel**

Your Definitive PowerMonitors are designed with built-in powered subwoofers which deliver excellent low frequency response and allow you to utilize the LFE .1 discrete low frequency bass channel included in Dolby Digital AC-3. Many listeners (especially those with larger rooms) may however want to use another additional powered subwoofer for the .1 channel in order to achieve even more bass impact with many action movies as well as some other extremely dynamic surround program material. This can easily be done by hooking the subwoofer to the LFE output on your receiver or decoder and telling your bass management system that you have “Large” left and right front main speakers and “yes” a subwoofer. If you do add another subwoofer, we strongly suggest adding a Definitive Powerfield, ProSub, or SuperCube™ in order to assure a proper match and best sound.

## **Use of PowerMonitors as Rear or Side Surround Speakers**

PowerMonitors make excellent rear or side surround speakers for the most highly advanced and sophisticated home theater installations. Because of their built-in powered subwoofers, they allow you to take full advantage of the full range rear or side surround signal provided by Dolby Digital, DTS, Dolby EX, 6.1 or 7.1 systems. In order to use the PowerMonitors as rear or side surround speakers, simply hook them up as normal to the rear or side channel amplifier outputs of your system, and set the bass management system of your decoder to “Large” rear or side surrounds.

## **Powering Up the Active Subwoofer Section**

Your PowerMonitors contain a built-in, active powered subwoofer section as well as an electronic crossover and so each PowerMonitor must be plugged into an electrical socket (use an unswitched outlet if possible) of the appropriate voltage (as indicated on the back of your unit) using the plug on the end of the black cord attached to the electronics module on the back of the loudspeaker. The PowerMonitor has a special circuit which automatically turns the powered subwoofer section on when a signal is fed to the loudspeaker and does not require an on-off switch. Please note that if you here a pop from the speaker when the amp powers up, this is normal. The red LED on the back panel will light up when a signal is sensed and the amplifier turns on. Please note that after the cessation of a signal, it may take up to an hour for the amplifier to actually turn off.

## Setting Your PowerMonitors' Low Frequency Control

Your PowerMonitors have a level control for the electronic crossover which allows you to perfectly tune the output level of the powered low frequency subwoofer section to match your room as well as to fulfill your own personal listening preferences. Please note that there are no controls to vary the crossover points or phase because these have been factory set to provide perfect blending (a major performance benefit of this innovative product.). Set the level control so that the sound is most pleasing to you. **We suggest starting at about 1 o'clock on the dial.**

### Setting Low-Frequency Balance When Using Separate LFE Input

We suggest that when you are using a separate LFE input, you set the bass level on your PowerMonitors to “sound balanced” when listening to music in stereo and use the .1 channel or bass level control in your Dolby Digital channel balancing procedure on your decoder to raise or lower the bass level for movie sound effects.

Normally the level control of the left speaker will be set the same as the level control of the right speaker. However, these controls can also be set differently on the two speakers in order to allow you to vary the response of left and right speakers separately to compensate for variations and asymmetrical positioning of the left and right speakers in your room (i.e., when one is closer to a side wall or corner, etc.) if this is how you must set them up. This is a very unique and useful feature which allows you much greater flexibility in loudspeaker placement, as well as the ability to optimize what could otherwise be difficult placement situations.

#### VERY IMPORTANT: SETTING CHANNEL BALANCE AND BASS MANAGEMENT SYSTEMS

Dolby Digital and Dolby ProLogic systems and decoders have a critical channel balancing procedure for the left and right front speakers, center channel, rears and subwoofer (if it is hooked up through the LFE or Sub Out low level connection) which must be followed if the system is to perform properly. We have spoken with many system users with problems relating to the overall sound of their system which could be clearly traced back to improper system balance.

Also note that Dolby Digital decoders have bass management systems (systems which direct the bass to the various channels) which vary from unit to unit. This bass management system must also be properly adjusted. If your PowerMonitor is hooked up with speaker level wires and no low level LFE channel input, your receiver or decoder's bass management system should be set for large left and right main speakers and NO subwoofer (even though you have subwoofers). This will properly channel the sub bass LFE information into the left and right channels and then into your subwoofers. If you have a PowerMonitor, C/L/R 2300, C/L/R 2500, or C/L/R 3000 center channel, you will usually set your decoder's bass management center channel setting to “Large” (however, don't be afraid to experiment). If not, set it to “Small.” If you are using rear surround speakers with very extended low frequency response—such as another pair of PowerMonitors—set the rear channels of your decoder's bass management system to “Large.” If not, set them to “Small.”

## Setting Bass and Treble Controls on Your Receiver or Amplifier

Normally we recommend that you set the Bass and Treble controls on flat or 0 dB. This will give you the most linear and natural sound. If you want more bass, raise the subwoofer's Level control on your PowerMonitor, keeping in mind that even a little turn of the knob can make a big difference in the sound. Also, if your amplifier or receiver has a graphic equalizer, we recommend that you leave it flat. The reason for this is that we have spoken with many consumers about what they thought were improperly sounding speakers when in fact the problem was misadjusted tone controls. **When in doubt, leave them flat; this almost always sounds the best.**

## The PowerMonitor Home Theater System

A complete PowerMonitor Home Theater System combines a pair of PowerMonitors with a perfectly matched Definitive center channel speaker (ideally, one with a built-in powered sub, such as a C/L/R 2300, C/L/R 2500, C/L/R 3000 or a PowerMonitor), perfectly matched Definitive rear and/or side surround speakers, and in many cases a separate subwoofer for the LFE channel. This superb system offers the ultimate in-home theater performance with all decoding technologies. Since the PowerMonitors already have powerful subwoofers built in, no additional subwoofers are needed, although certainly an additional LFE channel subwoofer will add even more bass impact, especially in larger rooms. Remember, to achieve proper blending and full performance, it is essential to use only Definitive speakers to complete your home theater system.



## Troubleshooting

If you experience any difficulties with your loudspeakers, try the suggestions described below. If you are still having problems, please consult your Definitive Technology Authorized Dealer for assistance.

1. Make sure all your system interconnects and power cords are solidly in place.
2. Should you experience any level of ground hum or noise, try plugging the power cord into the same circuit as your amplifier.
3. The system is provided with sophisticated internal protection circuitry. If for some reason the protection circuitry is tripped, please turn down your system's volume and wait five minutes before trying the system again. If the amplifier should overheat, the system will turn off until the amplifier cools down and resets.
4. Check to be sure that your power cord has not been damaged.
5. Check that no foreign objects or liquid has entered the cabinet.
6. If you cannot get the subwoofer driver on the side of the speaker to turn on or if no sound comes out and you are sure the system is set up properly, please bring the loudspeaker to your Definitive Technology Authorized Dealer for assistance. **Call First.**

## Technical Assistance

It is our pleasure to offer assistance if you have any questions regarding your PowerMonitors or their set-up. Please contact your nearest Definitive Technology dealer or contact us directly at 410-363-7148 or [www.definitivetech.com](http://www.definitivetech.com).

## Service

Service and warranty work on your Definitive loudspeakers will normally be performed by the Definitive Technology dealer from whom you have purchased your loudspeakers. If, however, you wish to return the speaker to us, please contact us first, describing the problem and requesting authorization as well as the location of the nearest factory service center. **Please note that the address given in this booklet is the address of our offices only. Under no circumstances should loudspeakers be shipped to our offices or returned without contacting us first and obtaining return authorization.**

Definitive Technology Offices  
11433 Cronridge Drive  
Owings Mills, Maryland 21117  
Phone: 410-363-7148

**Visit us at [www.definitivetech.com](http://www.definitivetech.com)**

# PowerMonitors Preliminary Specifications

## PowerMonitor 500

<b>Dimensions</b>	14.7"H x 5.75"W x 12.4"D
<b>Frequency Response</b>	22 Hz – 30 kHz
<b>Nominal Impedance</b>	Compatible with 4 – 8 ohm outputs. (Set amp on 4 if you have a choice.)
<b>Driver Complement</b>	4½" cast-basket polymer upper bass/mid range driver. 1" pure aluminum dome tweeter. One PowerField 8" subwoofer.
<b>Recommended Associated Amplification</b>	20 – 200 watts/channel
<b>Built-in Subwoofer Power Amplifier</b>	150 watts

## PowerMonitor 700

<b>Dimensions</b>	16.75"H x 6.8"W x 14.125"D
<b>Frequency Response</b>	20 Hz – 30 kHz
<b>Nominal Impedance</b>	Compatible with 4 – 8 ohm outputs. (Set amp on 4 if you have a choice.)
<b>Driver Complement</b>	5.25" cast-basket polymer upper bass/mid range driver. 1" pure aluminum dome tweeter. One PowerField 8" subwoofer.
<b>Recommended Associated Amplification</b>	20 – 250 watts/channel
<b>Built-in Subwoofer Power Amplifier</b>	250 watts

## PowerMonitor 900

<b>Dimensions</b>	18.375"H x 8.375"W x 16"D
<b>Frequency Response</b>	19 Hz – 30 kHz
<b>Nominal Impedance</b>	Compatible with 4 – 8 ohm outputs. (Set amp on 4 if you have a choice.)
<b>Driver Complement</b>	6½" cast-basket polymer upper bass/mid range driver. 1" pure aluminum dome tweeter. One PowerField 10" subwoofer.
<b>Recommended Associated Amplification</b>	30 – 300 watts/channel
<b>Built-in Subwoofer Power Amplifier</b>	250 watts

\*Registered Trademark

All specifications subject to change.

## **Limited Warranty: 5-Years for Drivers and Cabinets, 3-Years for Electronic Components**

Definitive Technology warrants to the original retail purchaser only that this Definitive Technology Loudspeaker Product (the "Product") will be free from defects in materials and workmanship for a period of five (5) years covering the drivers and cabinets, and three (3) years for the electronic components from the date of the original purchase from a Definitive Technology Authorized Dealer. However, this warranty will automatically terminate prior to the expiration of five (5) years for the drivers and cabinets and three (3) years for the electronic components if the original retail purchaser sells or otherwise transfers the Product to any other party. The original retail purchaser shall hereinafter be referred to as "you." Defective Products must be shipped, together with proof of date of purchase, prepaid insured to the Authorized Dealer from whom you purchased the Product, or to the nearest factory service center. Product(s) must be shipped in the original shipping container or its equivalent; in any case the risk of loss or damage in transit is to be borne by you. If, upon examination at the Factory or a Definitive Technology Authorized Dealer, it is determined that the unit was defective in materials or workmanship at any time during this Warranty period, Definitive Technology or the Definitive Technology Authorized Dealer will, at its option, repair or replace this Product at no additional charge, except as set forth below. All replaced parts and Product(s) become the property of Definitive Technology. Product(s) replaced or repaired under this Warranty will be returned to you, within a reasonable time, freight collect.

*This Warranty does not include service or parts to repair damage caused by accident, misuse, abuse, negligence, inadequate packing or shipping procedures, commercial use, voltage in excess of the rated maximum of the unit, cosmetic appearance of cabinetry not directly attributable to defects in materials or workmanship, or service, or repair or modification of the Product which has not been authorized by Definitive Technology. Definitive Technology makes no Warranty with respect to its Products purchased from dealers or outlets other than Definitive Technology Authorized Dealers. This Warranty is in lieu of all other expressed Warranties. If this Product is defective in material or workmanship as warranted above, your sole remedy shall be repair or replacement as provided above. In no event will Definitive Technology be liable to you for any incidental or consequential damages arising out of the use or inability to use the Product, even if Definitive Technology or a Definitive Technology Authorized Dealer has been advised of the possibility of such damages, or for any claim by any other party. Some states do not allow the exclusion or limitation of consequential damages, so the above limitation may not apply to you.*

*All implied warranties on the Product are limited to the duration of this expressed Warranty. Some states do not allow limitation on how long an implied Warranty lasts, so the above limitations may not apply to you. This Warranty gives you specific legal rights, and you also may have other rights which vary from state to state.*



This product complies with the essential requirements of EMC directives 89/336/EEC and 73/23/EEC (inclusive of 93/68/EEC) and carries the CE mark accordingly.